

FORENSIC SCIENCE DIVISION

Labyrinth – Quarterly Newsletter

March 2023

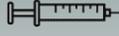


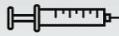
Biology

 STRMix probabilistic genotyping software is now online! Please see the next page for more information and upcoming reporting changes.

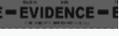
 The use of an IR camera has been implemented as a presumptive means to visualize blood stains on items with difficult colors or patterns.

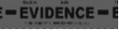
Chemistry

 Please make sure that all powdered evidence is secured properly in an airtight plastic bag. Envelopes are NOT an acceptable means of submitting drug evidence; powders may escape, resulting in a serious health risk for evidence personnel and analysts.

 Reports are required for GSR cases.

Evidence

 When submitting bodies or tox kits for traffic fatalities, if there are survivors of the crash please give us the crash number as well. This allows us to connect the cases.

 **PLEASE** use the correct submission form. They are all online at <https://dojmt.gov/crime/forms/>. If you are unable to submit the correct form for any reason, please note what the correct form should have been. We need to know if the analysis requested is for a DUI, sex assault, or postmortem investigation.

Firearms

 Coming soon: A 3D scanning and analysis system, which will provide higher resolution, analytic tools for real and virtual comparisons, store previously scanned images, and eventually allow statistics for comparison conclusions.

 FA has a new and improved bullet recovery tank that is more efficient than our previous one. This refurbished tank is originally from the 90's!

Latent Prints

 LP temporarily has only one analyst. To assist with turnaround times, some cases may be outsourced. Agencies will be notified as applicable, and will need to submit written acknowledgment and permission.

 We are creating short lessons on how to photograph latent impressions, collect known exemplars, and more. These will be made available to agencies soon.

Toxicology

 The breath alcohol staff has been actively training at MLEA, MHP, and in Columbus, MT. These trainings involved instruction on the use of the Intoxilyzer 9000, SFST's, and simulated DUI traffic stops.

 Please join us in welcoming our newest toxicologists, Jaimie Soderling and Scott Larson. They have been great additions thus far! Please see the next page for an Employee Spotlight on Jaimie.

Miscellaneous

 FSD will be upgrading our LIMS system to a more modern version at the end of March, which will give us opportunities to add new elements. For example, Portal, which is an electronic pre-log exchange system for agencies to submit case information and receive final reports.

Labyrinth - continued

Website Updates

The Forensic Science Division Website has undergone major changes. New information is now available online, such as our Policies and Procedures, Discovery Records, Traceability, and some Latent Print Collection Resources. Other information has been reorganized for clarity, so please update your bookmarks. If you're having trouble accessing or finding any information that you need, please let us know!

Policies / Procedures	Evidence Resources	Medical Examiner / Coroner	More Resources
Accreditation Info	FSD Forms	Montana Medical Examiner Office	Annual Reports & Newsletter
Policies & Procedures	Evidence Collection Resources	Coroners & Law Enforcement Resources	Career Information
Discovery / Records			Forensic Science Laboratory Advisory Board
Traceability			

STRMix

The Biology section has implemented a probabilistic genotyping software called "STRmix." This is a powerful analysis tool which can help provide more information for complex DNA mixtures and expedite DNA mixture interpretation.

The software generates results using a different mathematical process than what has traditionally been used. Therefore, the way in which DNA results are reported will be changing in early 2023. The lab will be moving away from reporting random match probabilities (RMPs) and combined probabilities of inclusion (CPIs) to likelihood ratios (LRs). These changes will not apply to serology, Y-screening, Y-STR DNA analysis, or paternity analysis. The use of STRmix has been thoroughly vetted and widely accepted within the scientific community.

Employee Spotlight

Jaimie Soderling is the newest employee at the Montana State Crime Lab! She recently joined the Toxicology Section after earning Bachelor's Degrees in both Chemistry and Sociology from the University of Montana. Originally from Eureka, Montana, Jaimie previously interned at the Crime Lab. She loves swimming, playing sports, the outdoors, and camping, and



secretly enjoys hiking. Her creative side tackles projects like pottery, painting, and creating art from recycled materials. Jaimie is a dog mom to Xia, a pitbull/lab mix. Welcome, Jaimie!

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Please take the survey on our website.

